# 8x4 SWITCHER MANUAL
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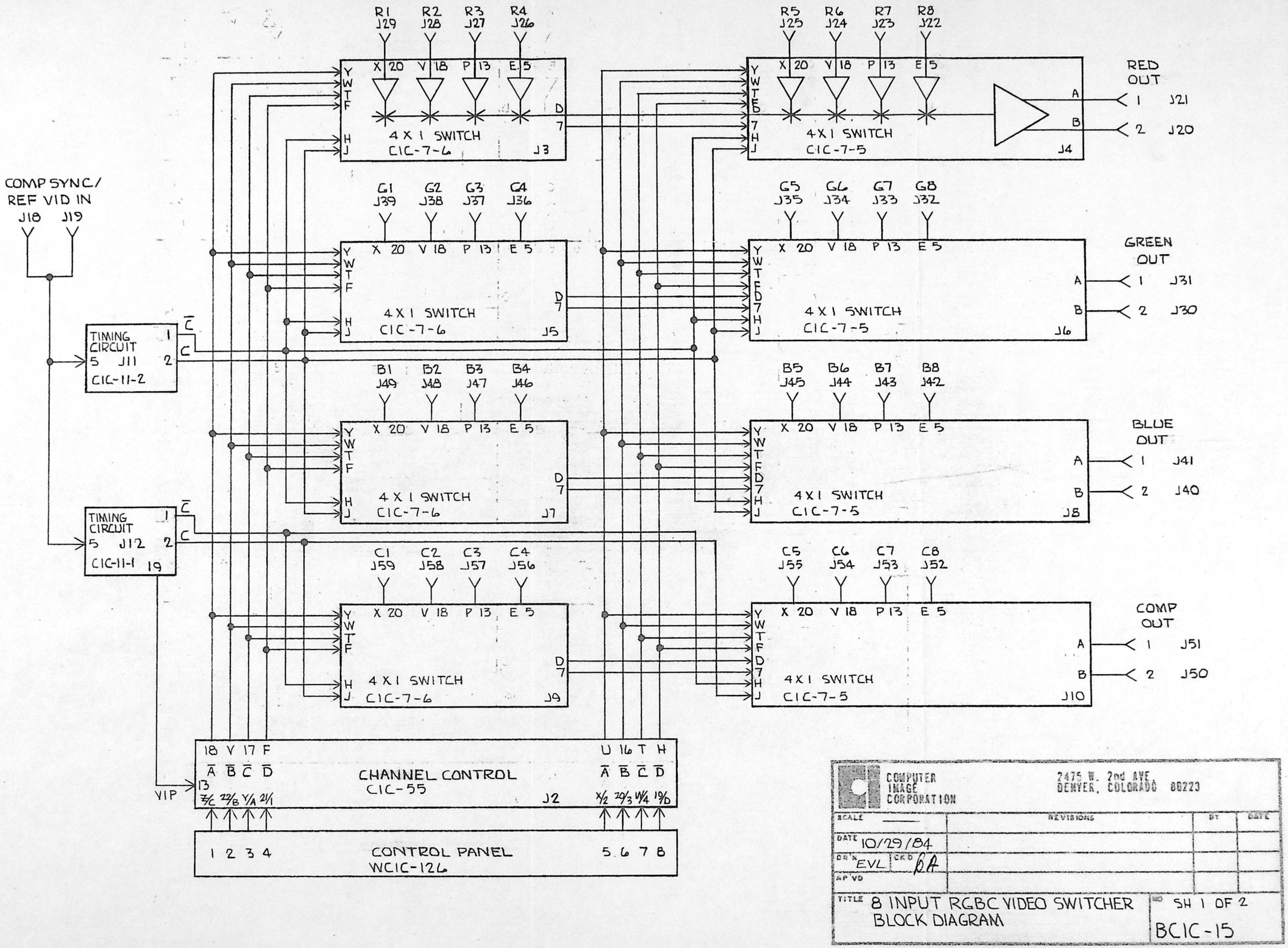

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|---|---|---|---|
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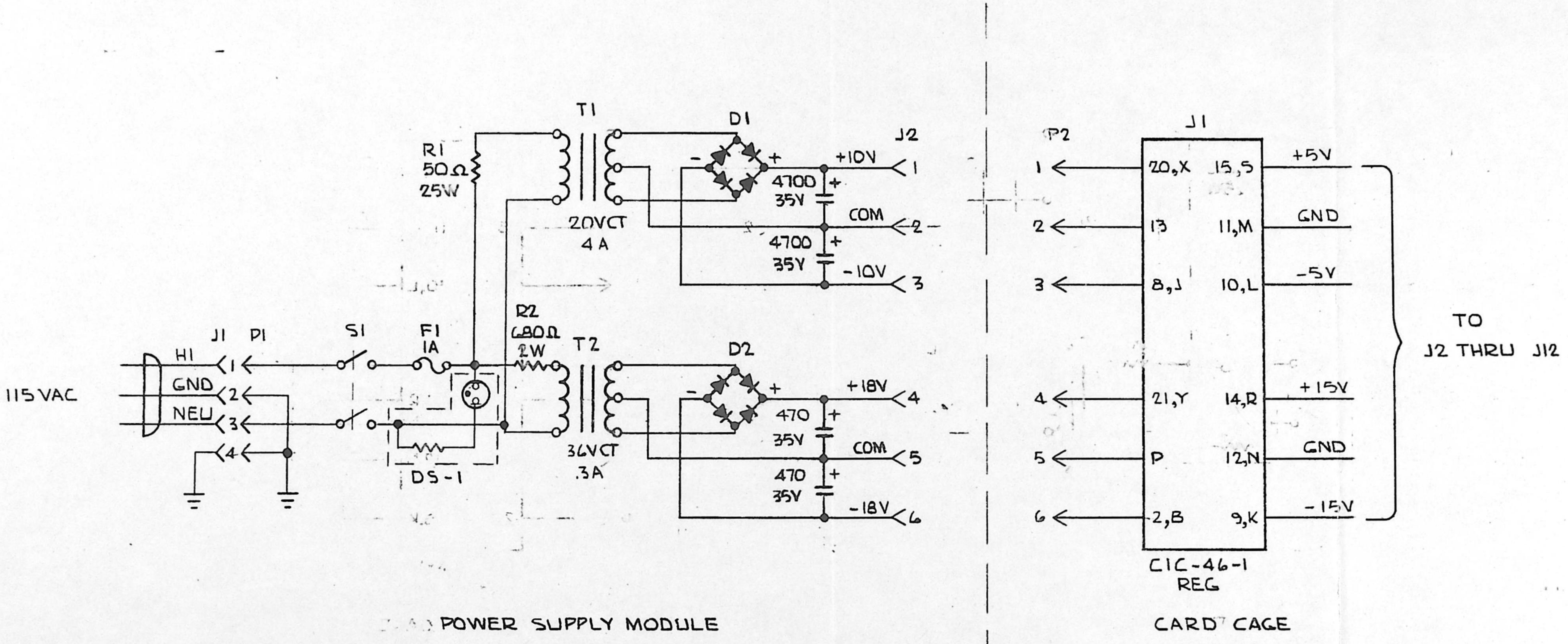
| DR'N EVL / CK'D GA | | | |
| AP'VD | | | |

TITLE 8 INPUT RGBC VIDEO SWITCHER
BLOCK DIAGRAM

NO SH 1 OF 2
BCIC-15



NOTES:

1. ALL CAPACITANCE VALUES ARE IN MFD

REV: A;

| | | | |
|---|---|---|---|
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| DR'N EVL CKD BA | | | |
| AP'VD | | | |
| TITLE 8X4 VIDEO SWITCHER PWR SUP BLOCK DIAGRAM | NO BC1C-15 SH 2 OF 2 | | |

| SCHEMATIC | | | | | | WIRE LIST | | |
|---|---|---|---|---|---|---|---|---|
| REV | ECN # | SHEETS AFFECTED | DESCRIPTION | RELATED ECN # | DATE | NAME | DATE | CHANGE DESCRIPTION |
| — | 34 | | ADD 2 INPUTS (NOT DONE ON 026-1) | | 5/6/82 | | | |
| = | 35 | | CORRECT NON-LINEARITY IN VIDEO | | 5/10/82 | | | |
| | 155 | | R15 = 220Ω; Q6 = 2N3904; CIRCUIT TYPICAL - 4 PLACES | | 6/3/85 | | | |

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS ± DEC ± ANGLES ±

| APPROVALS | DATE |
|---|---|
| DRAWN | |
| CHECKED | |

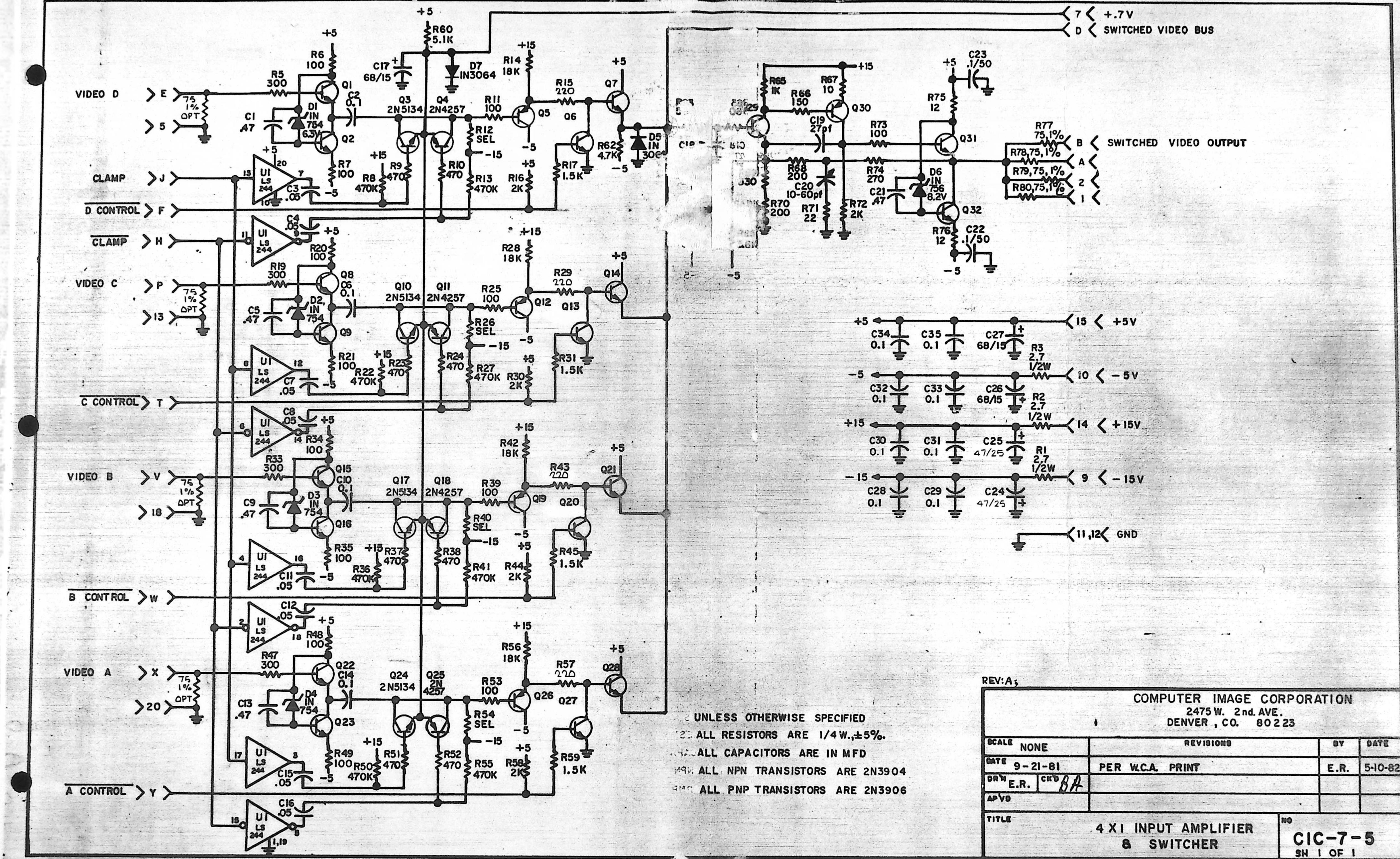
## COMPUTER IMAGE

4 X 1 IN AMP & SWTCHR
CONTROL SHEET

SCALE
SIZE B
DRAWING NO. CIC-7-5

DO NOT SCALE DRAWING
SHEET 0 - 1

BISHOP GRAPHICS, INC.
REORDER NO. 20621



UNLESS OTHERWISE SPECIFIED

ALL RESISTORS ARE 1/4 W., ±5%.

ALL CAPACITORS ARE IN MFD

ALL NPN TRANSISTORS ARE 2N3904

ALL PNP TRANSISTORS ARE 2N3906

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| | | | |
|---|---|---|---|
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| DATE 9-21-81 | PER W.C.A. PRINT | E.R. | 5-10-82 |
| DR'N E.R. CK'D BA | | | |
| AP'VD | | | |

TITLE
4 X 1 INPUT AMPLIFIER
& SWITCHER

NO
CIC-7-5
SH 1 OF 1

## SCHEMATIC

| REV | ECN # | SHEETS AFFECTED | DESCRIPTION | RELATED ECN # | DATE |
|---|---|---|---|---|---|
| | 155 | | R15=220Ω; QL=2N3904; CIRCUIT TYPICAL - 4 PLACES | | 6/3/85 |

## WIRE LIST

| NAME | DATE | CHANGE DESCRIPTION |
|---|---|---|
| | | |

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS ± DEC ± ANGLES ±

| APPROVALS | DATE |
|---|---|
| DRAWN | |
| CHECKED | |

**COMPUTER IMAGE**

4 X 1 IN AMP & SWTCHR

CONTROL SHEET

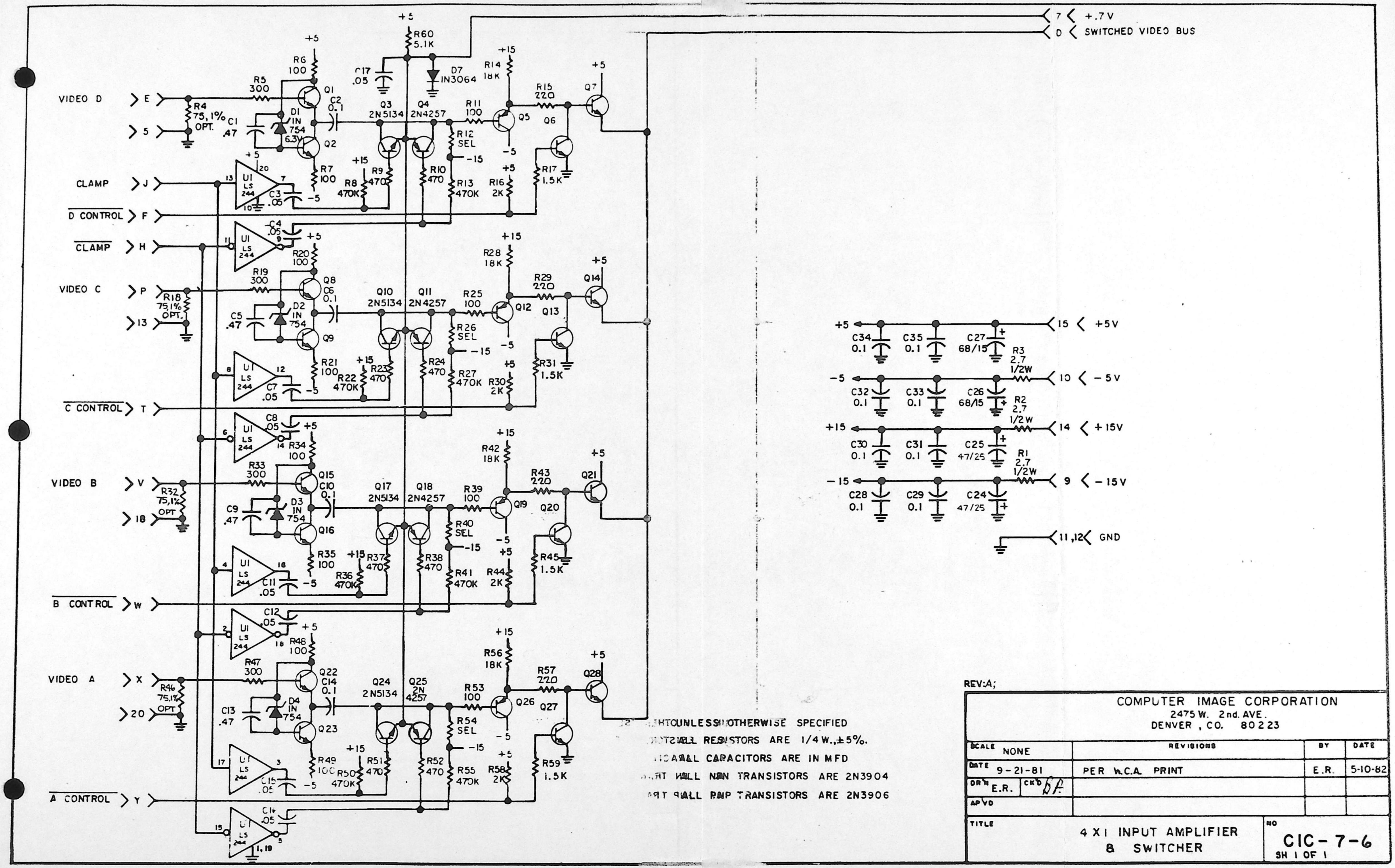
SCALE

SIZE B

DRAWING NO. CIC-7-6

DO NOT SCALE DRAWING

SHEET 0 - 1



UNLESS OTHERWISE SPECIFIED

ALL RESISTORS ARE 1/4 W., ±5%.

ALL CAPACITORS ARE IN MFD

ALL NPN TRANSISTORS ARE 2N3904

ALL PNP TRANSISTORS ARE 2N3906

REV:A;

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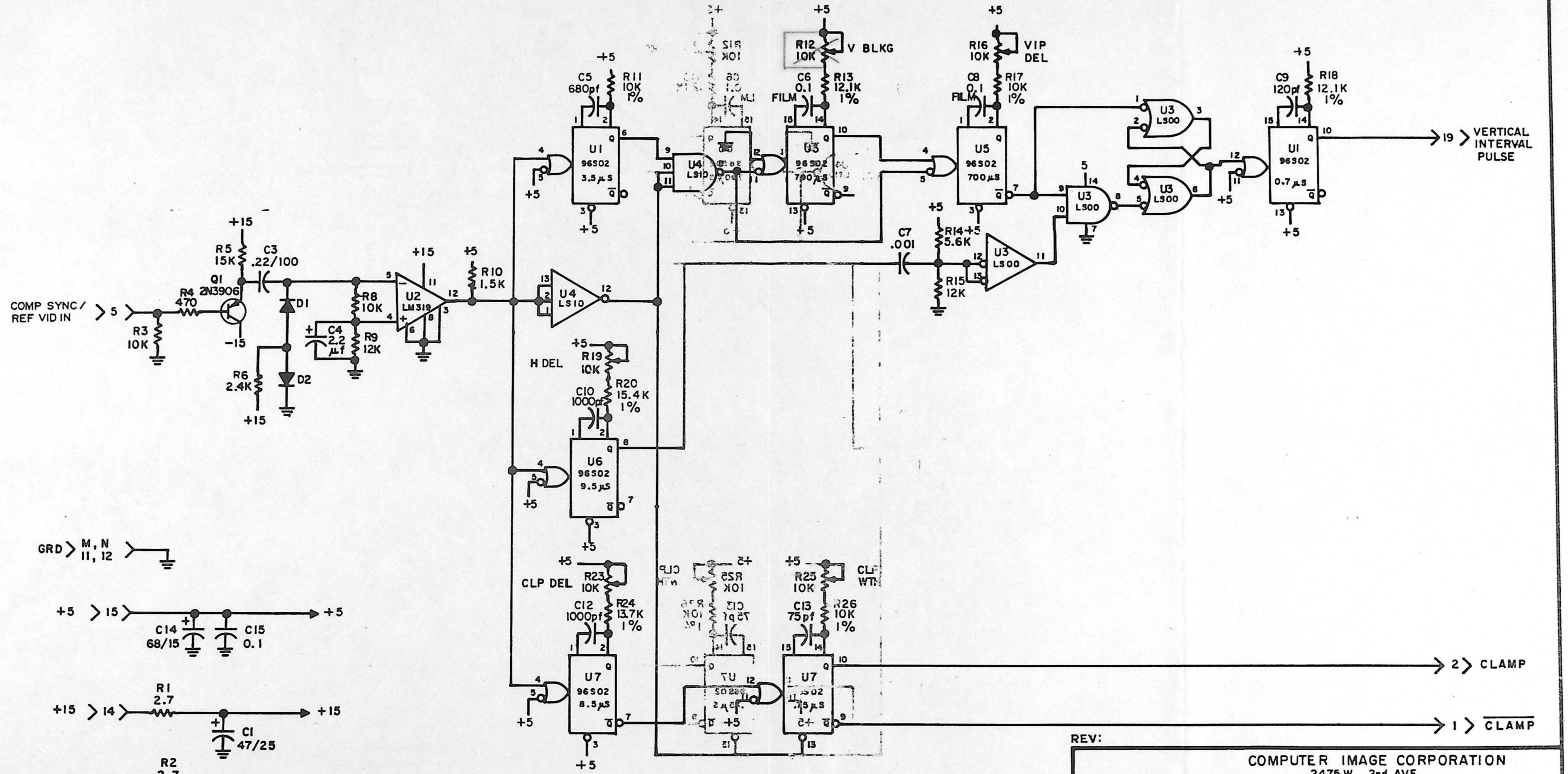
| DATE 9-21-81 | | PER W.C.A. PRINT | E.R. | 5-10-82 |
| DR'N E.R. | CK'D BF | | | |
| AP'VD | | | | |

TITLE 4 X 1 INPUT AMPLIFIER & SWITCHER

NO CIC-7-6
SH 1 OF 1



UNLESS OTHERWISE SPECIFIED
ALL RESISTORS [illegible] %
ALL 1% RES [illegible]
ALL CAPACITORS [illegible]
ALL DIODES A [illegible]
+5V PIN 16 OF 96S02
GRD PIN 8 96S02
R13 DIRECT TO +5V

REV:

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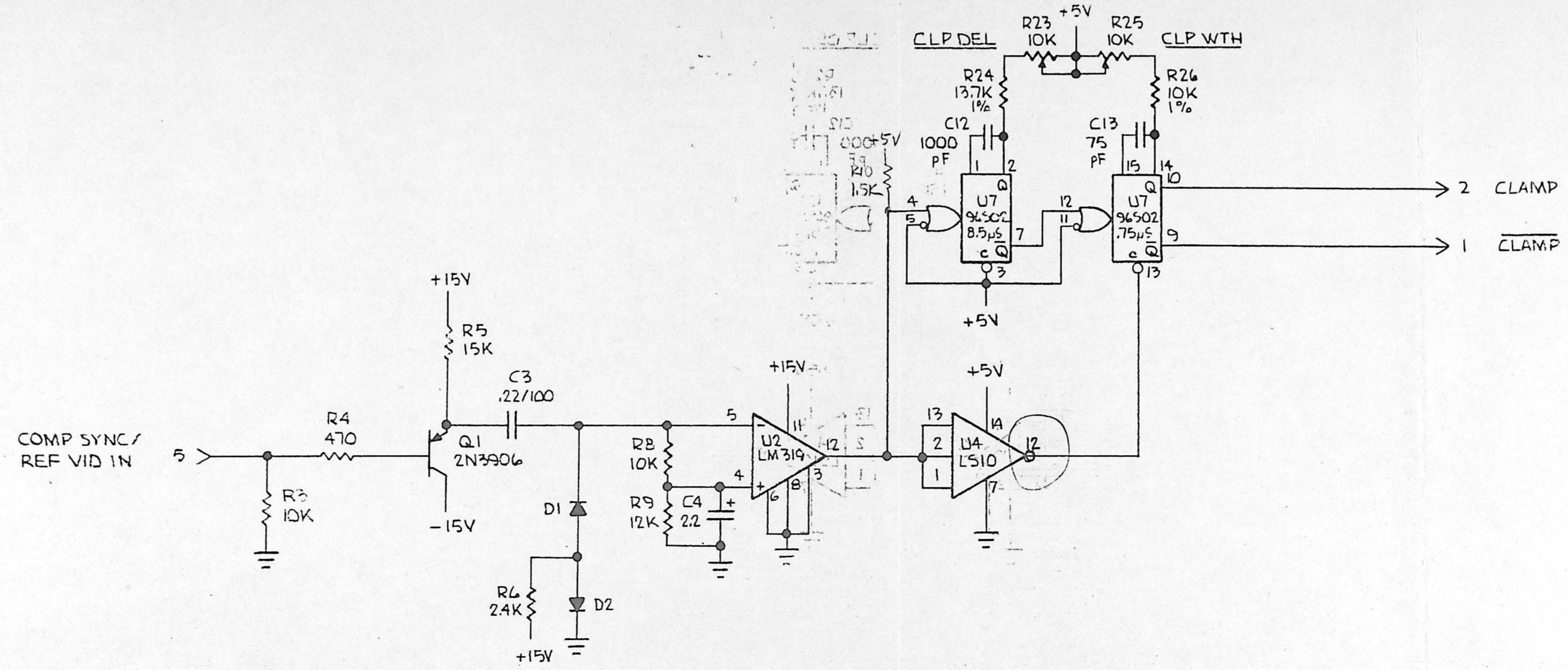
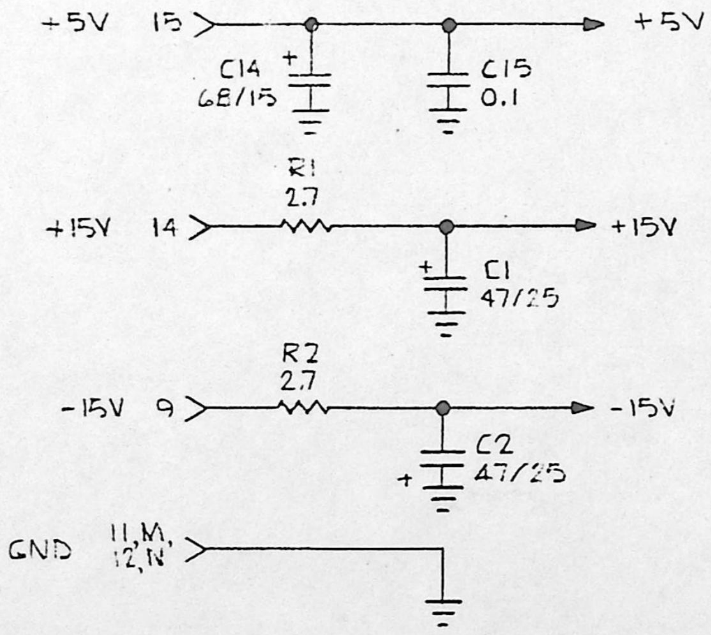
| | REVISIONS | BY | DATE |
|---|---|---|---|
| SCALE NONE | | | |
| DATE 8-14-81 | PER W.C.A. PRINT | E.R. | 3-10 |
| DR'N E.R. CK'D GA | | | |
| AP'VD | | | |

TITLE TIMING CIRCUIT

NO CIC-11-1





NOTES:

UNLESS OTHERWISE SPECIFIED:

1. ALL RESISTORS ARE 1/4W, ±5%
2. ALL 1% RESISTORS ARE 1/8W
3. ALL CAPACITOR VALUES ARE IN MFD
4. ALL DIODES ARE IN3064

OK 361-11

COMPUTER IMAGE CORPORATION

11/75784

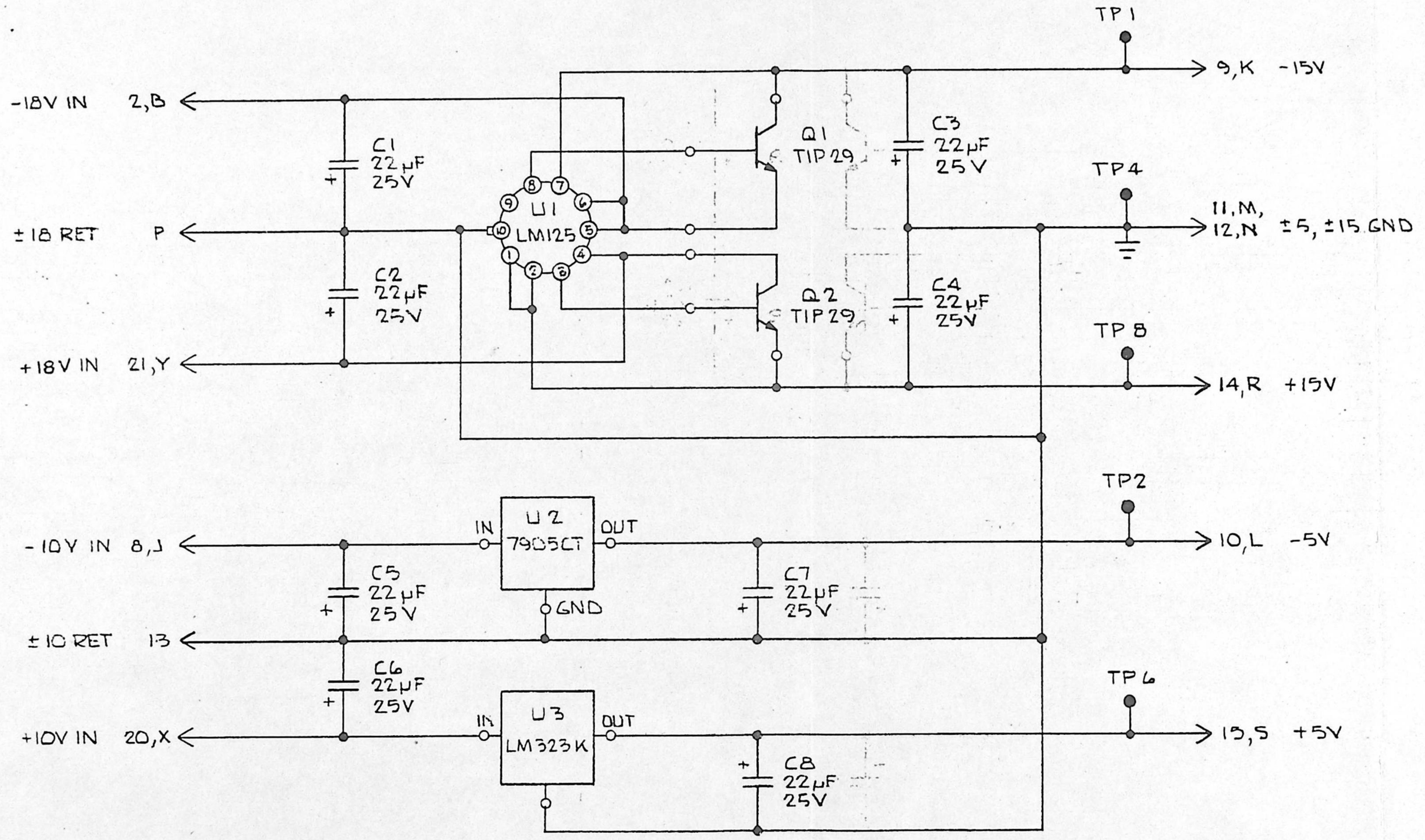
EVL

TIMING CIRCUIT

SH 1 OF 1

CIC-11-2

| TOLERANCE | | |
|---|---|---|
| [illegible] | ± | [illegible] |
| [illegible] | ± | [illegible] |
| [illegible] | ± | [illegible] |



361-11

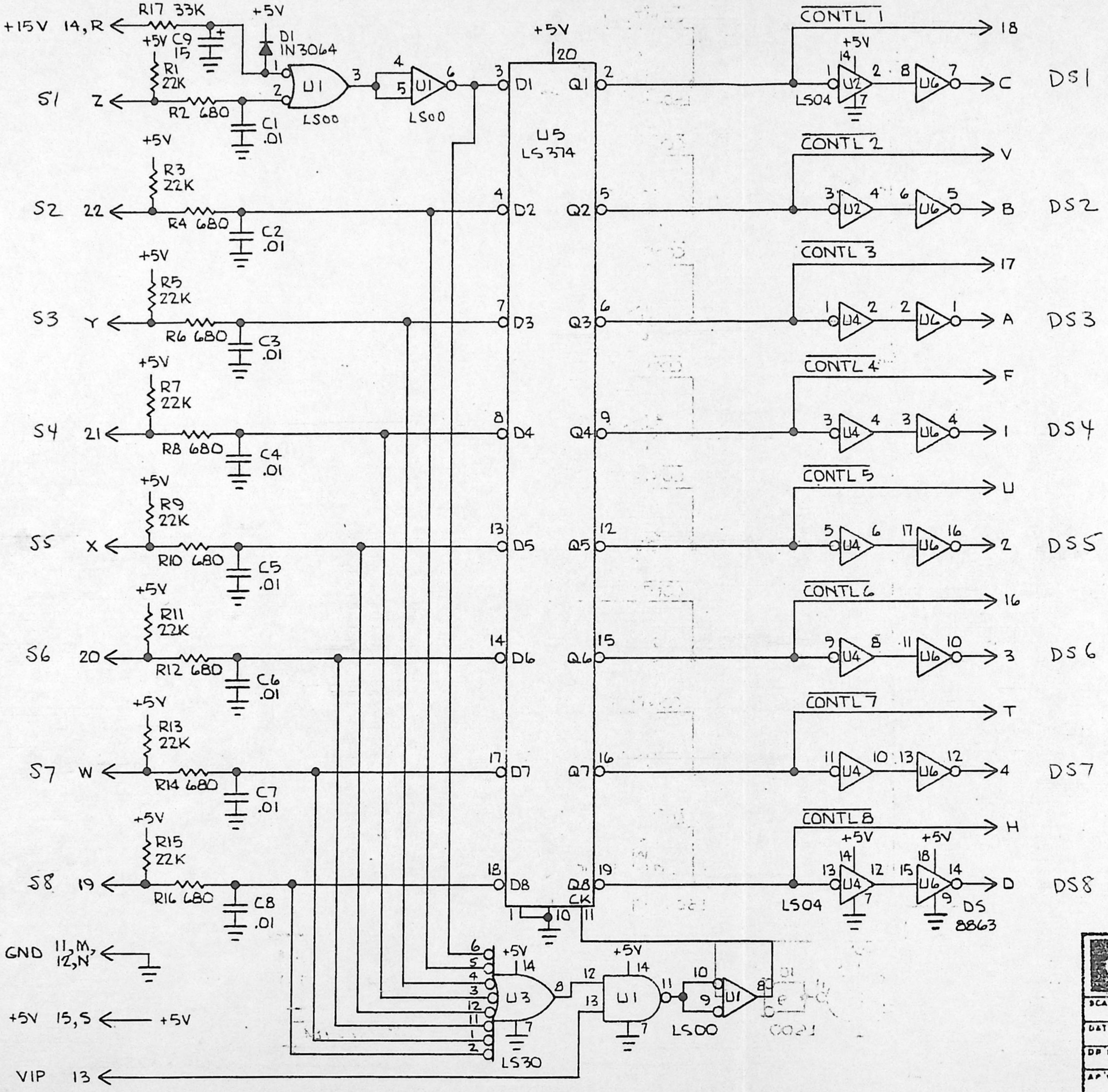
11/2/84

EVL

POWER REGULATOR

SH 1 OF 1

CIC-46-1



NOTES:
UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS ARE ¼W, 5%, VALUES IN OHMS
2. ALL CAPACITOR VALUES ARE IN MFD

361-11

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IMAGE
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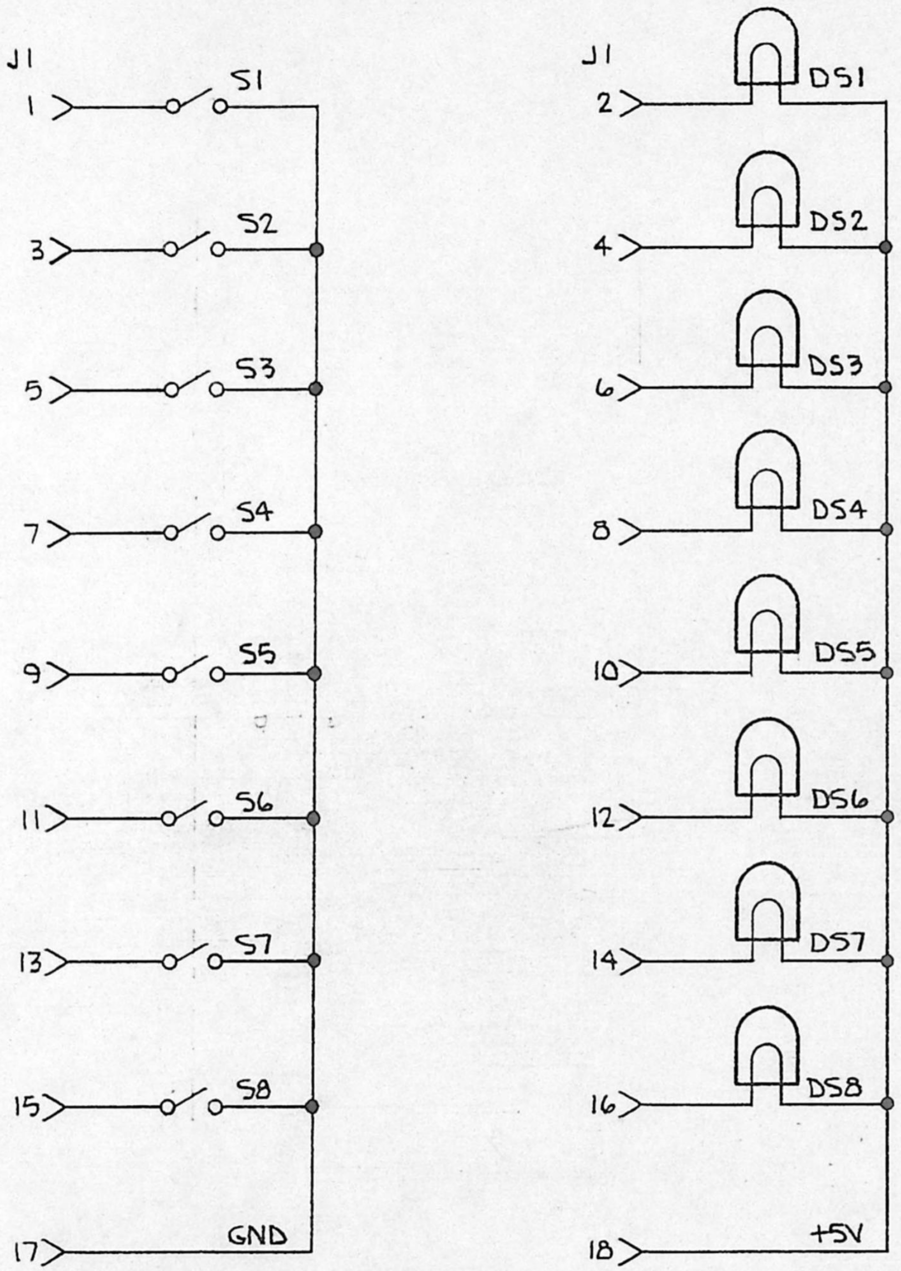
| DATE 11/6/84 | | | |
| DR'N EVL / CK'D BA | | | |
| AP'VD | | | |

TITLE SWITCHER CHANNEL CONTROL

SH 1 OF 1

CIC-55



NOTES:
1. DS-1 THRU DS-8. IS TYPE 328

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|  |  |  |  |
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| DATE 11/6/84 |  |  |  |
| DR'N EVL / CK'D BA |  |  |  |
| AP'VD |  |  |  |

TITLE 8 X 4 SWITCHER CONTROL PNL

NO SH 1 OF 1

WC1C-126

* * *

THIS IS THE SETUP FOR THE CIC-7 ALL VERSIONS

In the Video Switcher

| | | |
|---|---|---|
| | Card in J3 | Card in J4 |
| | CIC-7-6 | CIC-7-5 |
| Video "A" | RED Input 1 | RED Input 5 |
| Video "B" | RED Input 2 | RED Input 6 |
| Video "C" | RED Input 3 | RED Input 7 |
| Video "D" | RED Input 4 | RED Input 8 |
| | Card in J5 | Card in J6 |
| | CIC-7-6 | CIC-7-5 |
| Video "A" | GRN Input 1 | GRN Input 5 |
| Video "B" | GRN Input 2 | GRN Input 6 |
| Video "C" | GRN Input 3 | GRN Input 7 |
| Video "D" | GRN Input 4 | GRN Input 8 |
| | Card in J7 | Card in J8 |
| | CIC-7-6 | CIC-7-5 |
| Video "A" | BLUE Input 1 | BLUE Input 5 |
| Video "B" | BLUE Input 2 | BLUE Input 6 |
| Video "C" | BLUE Input 3 | BLUE Input 7 |
| Video "D" | BLUE Input 4 | BLUE Input 8 |
| | Card in J9 | Card in J10 |
| | CIC-7-6 | CIC-7-5 |
| Video "A" | COMPOSITE Input 1 | COMPOSITE Input 5 |
| Video "B" | COMPOSITE Input 2 | COMPOSITE Input 6 |
| Video "C" | COMPOSITE Input 3 | COMPOSITE Input 7 |
| Video "D" | COMPOSITE Input 4 | COMPOSITE Input 8 |

STEP 1 Apply a 1 volt p-p multiburst to the "Video A" input of the CIC-7.

STEP 2 Look at the signal at pin A, with 75 ohm, 1% termination on both outputs.

STEP 3 Adjust Gain R70 on the appropriate CIC-7-5 for 1 volt p-p output.

STEP 4 Adjust Peaking C20 for flattest frequency response.

STEP 5 Confirm there is a 1 volt p-p output when input is moved from "Video A" to Video "B", "Video C", and "Video D" inputs.

STEP 6 Repeat the above steps for each of the output channels. (RED, GREEN, BLUE AND COMPOSITE)

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THIS IS THE SETUP FOR THE CIC-11-1 &-2 TIMING CIRCUIT FOR THE VIDEO SWITCHER

STEP 1 Put scope probe on pin 6 of U1 on the CIC-11-1 card at J12.

STEP 2 Confirm that the pulse width is approximately 3.5u.s.

STEP 3 Put scope probe on pin 10 of U5.

STEP 4 Confirm that the pulse width is approximately 1140ms.

STEP 5 Put scope probe on pin 7 of U5.

STEP 6 Adjust R16 VIP DEL for a 700u.s. pulse width.

STEP 7 Put scope probe on pin 6 of U6.

STEP 8 Adjust R19 H DEL for a 9.5u.s. pulse width.

STEP 9 Put scope probe on pin 7 of U7.

STEP 10 Adjust R23 CLP DEL for a 8.5u.s. pulse width.

STEP 11 Put scope probe on pin 10 of U7.

STEP 12 Adjust R25 CLP WTH for a .75u.s. pulse width.

STEP 13 As a final check on the clamp timing, compare the clamp pulse time to the composite video out of the CIC-7-5 at J10. The clamp pulse should be centered on the back porch of the video. Adjust R23 CLP DEL (clamp delay) if necessary.

STEP 14 Put scope probe on pin 7 of U7 on the CIC-11-2 at J11.

STEP 15 Adjust R23 CLP DEL for a 8.5u.s. pulse width.

STEP 16 Put scope probe on pin 10 of U7.

STEP 17 Adjust R25 CLP WTH for a .75u.s. probe width.

STEP 18 As a final check on the clamp timing, compare the clamp pulse time to the non-composite video out of any of the CIC-7-5`s at J4, 6 or 8. The clamp pulse should occur during the blanking portion of the video. Adjust R23 CLP DEL if necessary.